REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

I. STATUS OF THE CLAIMS

Claims 2 and 3 are amended herein.

New claims 5-7 are added.

In view of the above, it is respectfully submitted that claims 1-7 are currently pending and under consideration.

II. REJECTION OF CLAIMS 1-4 UNDER 35 U.S.C. § 103(A) AS BEING UNPATENTABLE OVER TAKEHANA ET AL. (JP 10-210008) IN VIEW OF IWANO (JP 07-030520)

The present invention as recited, for example, in claim 1 relates to a wavelength division multiplexing apparatus comprising "optical shutoff means for shutting off an input of an optical signal of a wavelength not used among the plurality of optical signals."

Takehana discloses a transmitting device for transmitting wavelength multiple light and a receiving device for the same.

The Examiner points out that Takehana discloses the claimed optical shutoff means as indicated by the control part and switch 7 of Takehana.

However, Takehana does not teach or suggest an optical shutoff means that shuts off an input of an optical signal of a wavelength not used from among a plurality of optical signals. As disclosed by Takehana, the control part 4 controls an optical switch, and allows an optical signal of a terminal station device 1-1 to be inputted to a stand-by transponder 2-r. Here, it appears that none of the optical signal(s) are shut off. More specifically, Takehana does not suggest that an input of the optical signal of a wavelength not used among a plurality of optical signals, is shut off.

Therefore, Takehana fails to teach the features as recited in claim 1 of the present application.

Iwano discloses an optical fiber amplifier for wavelength multiplex transmission.

However, Iwano does not disclose the claimed optical shutoff means and thus, cannot be

combined with the teachings of Takehana to disclose the claimed invention.

Therefore, Takehana and Iwano, either alone or in combination, do not teach or suggest the features as recited in claim 1 of the present application.

Claims 2 and 3 depend from independent claim 1. Therefore, for at least the reasons that claim 1 distinguishes over the cited prior art, it is respectfully submitted that claims 2 and 3 also distinguish over the cited prior art.

In regard to claim 4, both Takehana and Iwano do not teach or suggest the use of a wavelength monitoring device. Moreover, Takehana and Iwano do not teach a wavelength monitoring device provided between transponders and variable attenuators for monitoring optical signals for a wavelength deviation as recited, for example, in claim 4 of the present application.

Therefore, Takehana and Iwano, either alone or in combination, do not teach or suggest the features as recited in claim 4 of the present application.

In view of the above, it is respectfully submitted that the rejection is overcome.

III. NEW CLAIM

New claim 5 recites "an optical shutoff device to shut off an input of an optical signal not used among the plurality of optical signals," and therefore patentably distinguishes over the cited prior art. New claims 6 and 7 depend from independent claim 5 and thus, also distinguish over the cited prior art.

In view of the above, it is respectfully submitted that claims 5-7 patentably distinguish over the cited prior art.

IV. CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that each of the claims patentably distinguishes over the prior art, and therefore defines allowable subject matter. A prompt and favorable reconsideration of the rejection along with an indication of allowability of all pending claims are therefore respectfully requested.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Please AMEND the claims in accordance with the following:

1. (AS UNAMENDED) A wavelength division multiplexing apparatus comprising:

a plurality of variable attenuators to which a plurality of optical signals of different wavelengths are respectively input, and which respectively attenuate the input optical signals with variable amounts of attenuation;

an optical combiner which combines optical outputs of the plurality of variable attenuators;

an optical amplifier which optically amplifies an optical output of the optical combiner;

a spectrum analyzer unit which measures the spectrum of an optical output of the optical amplifier, and controls each of the plurality of variable attenuators so as to maintain the optical power level of each wavelength at a predetermined level in accordance with the result of the measurement; and

optical shutoff means for shutting off an input of an optical signal of a wavelength not used among the plurality of optical signals.

2. (ONCE AMENDED) [A] <u>The</u> wavelength division multiplexing apparatus according to claim 1, wherein the optical shutoff means includes an optical switch provided at an input of each of the variable attenuators.

3. (ONCE AMENDED) [A] <u>The</u> wavelength division multiplexing apparatus according to claim 1, further comprising<u>:</u>

a transponder that includes a plurality of optical-to-electrical converters which respectively convert a plurality of optical signals of the same wavelength into a plurality of electrical signals and a plurality of electrical-to-optical converters which respectively convert the plurality of electrical signals into a plurality of optical signals of different wavelengths, and wherein[:]<u>,</u>

the optical shutoff means includes a shutdown control circuit which selectively shuts down the plurality of electrical-to-optical converters.

4. (AS UNAMENDED) A wavelength division multiplexing apparatus comprising:

a plurality of transponders which respectively convert a plurality of optical signals of the same wavelength into a plurality of optical signals of different wavelengths;

a plurality of variable attenuators to which the plurality of optical signals of different wavelengths are respectively input, and which respectively attenuate the input optical signals with variable amounts of attenuation;

an optical combiner which combines optical outputs of the plurality of variable attenuators;

an optical amplifier which optically amplifies an optical output of the optical combiner;

a wavelength monitoring device, provided between the transponders and the variable attenuators, for monitoring each optical signal for a wavelength deviation; and

a controller which sets the amount of attenuation to a maximum value for the optical attenuator corresponding to the optical signal that has been detected by the wavelength monitoring device as having a wavelength deviation greater than a predetermined value.

Please ADD the following NEW claims:

5. (NEW) A wavelength division multiplexing apparatus, comprising:

a plurality of attenuators to which a plurality of optical signals of different wavelengths are respectively input, and which respectively attenuate the input optical signals with variable amounts of attenuation;

an optical combiner which combines optical outputs of the attenuators;

an optical amplifier which optically amplifies an optical output of the optical combiner; and

an optical shutoff device to shut off an input of an optical signal not used among the plurality of optical signals.

6. (NEW) The wavelength division multiplexing apparatus according to claim 1, wherein the optical shutoff device comprises:

an optical switch provided at an input of each of the attenuators.

7. (NEW) The wavelength division multiplexing apparatus according to claim 1, further comprising:

a transponder that includes a plurality of optical-to-electrical converters which

respectively convert a plurality of optical signals of the same wavelength into a plurality of electrical signals and a plurality of electrical-to-optical converters which respectively convert the plurality of electrical signals into a plurality of optical signals of different wavelengths, and wherein,

the optical shutoff device includes a shutdown control circuit which selectively shuts down the plurality of electrical-to-optical converters.